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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/540,280

01/10/2006

Christine Linke

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7590 01/23/2007
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EXAMINER

SMITH, RICHARD A

ART UNIT

PAPER NUMBER

2859

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 01/23/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/540,280 | LINKE ET AL. | |
| | Examiner | Art Unit | |
| | R. Alexander Smith | 2859 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>20050622</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 22 and 24 are objected to because of the following informalities:

Claim 22: "a a" should be --a--.

Claim 24: "said film" spanning lines 1-2 lacks antecedent basis.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13, 14 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,161,557 to Suzuki et al.

Suzuki et al. discloses a temperature-indicating element for a refrigeration device (column 5 lines 22-24), comprising: a backing (14); a thermochromic layer applied to said backing for indicating a predetermined desired temperature; and (12 and 14), and said thermochromic layer enclosed between said backing and a transparent protective layer (16), said transparent layer formed from a casting compound (column 9, lines 33-35 and column 13 lines

Art Unit: 2859

24-25), and the backing being enclosed between the casting compound and a film (if the adhesive 18 is a film).

4. Claims 13, 14, 19-22, 25, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,738,549 to Plimpton.

Plimpton discloses a temperature-indicating element, comprising:
a backing (30); a thermochromic layer (20a-k) applied to said backing for indicating a predetermined desired temperature; and said thermochromic layer enclosed between said backing and a transparent protective layer (the upper portion of the casing material column 4, lines 51-54),

said transparent layer formed from a casting compound (by being placed in a mold, then filled and allowed to cure),

said backing enclosed between said casting compound and a film (via the insertable inlays or the advertising indicia as a plate or strip 50, column 4 line 59 to column 5 line 2),

including said film printed on the side facing said casting compound (so that the advertising can be seen),

including a preferred orientation mark (the advertising indicia and the thermochromic indicia are orientation marks so that the device can be mounted to read the text right side up),

said backing embedded in a backing element and covered by said transparent layer (column 4, lines 47-56).

With respect to claims 13 and 25: The Applicant should note that the preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or

Art Unit: 2859

the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

With respect to claims 22 and 28 and "for mounting said element in the refrigeration device": This intended use has not been given any patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al.

Suzuki et al. teaches all that is claimed as discussed in the above rejections of claims 13, 14 and 19. Furthermore, Suzuki et al. discloses that casting can be used for the multiple layers, that the thermochromic solution is vacuum treated to remove air bubbles, and dried, i.e., cured, at room temperature (column 13 lines 42-59), and protective layer can be from any suitable material but prefers polyvinyl butyral, and that the backing can be from polyurethane (column 8 lines 27-39).

Suzuki et al. does not disclose said casting compound formed from a plastic room temperature curable material, said casting compound is a polyurethane material, said casting compound formed from a vacuum treated material which is then cured.

With respect to the casting compound (as the transparent protective layer) being a vacuum treated material and a room temperature curable material: Suzuki et al. discloses that both the protective coating and the thermochromic solution can be cast. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the vacuum treated material and room curable for both layers in order to prevent bubbles from ruining the integrity of the protective coating and to apply the protective coating and cure without extra costs of heating.

With respect to the casting compound being polyurethane: As noted above Suzuki et al. teaches that any suitable material can be used for the transparent protective coating and does suggest the use of polyurethane for the backing. Therefore, the Applicant's limitations regarding polyurethane is only considered to be the use of "optimum" or "preferred" materials that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide to make the casting compound disclosed by Suzuki et al. since they are well known types of materials used to make layers and since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshen, 125 USPQ 416.

7. Claims 16, 18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plimpton.

Plimpton teaches all that is claimed as discussed in the above rejections of claims 13, 14, 19-22, 25, 27 and 28 except for said backing formed from an aluminum metal plate and the casting compound being from polyurethane material.

Plimpton discloses that the backing (30) can be a strip of any suitable material such as plastic (column 3 lines 21-22), that the advertising can be provided on a plate or strip (50), and that the casing can be made from a number of synthetic materials (column 2 lines 20-28). Therefore, the Applicant's limitations regarding the backing being aluminum metal plate and the casing being of polyurethane, absent any criticality, are only considered to be the use of "optimum" or "preferred" materials that a person having ordinary skill in the art at the time the

invention was made using routine experimentation would have found obvious to provide to make the backing and the casting compound disclosed by Plimpton since they are well known types of materials used to make backings and protective layers respectively and since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention, In re Leshen, 125 USPQ 416. In this case to provide a backing of a suitable material which conducts heat well and a moldable, water impermeable and partially transparent protective layer.

8. Claims 23, 24, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plimpton in view of US 6,385,869 to MacWilliams et al.

Plimpton teaches all that is claimed as discussed in the above rejections of claims 13, 14, 19-22, 25, 27 and 28 except for said thermochromic layer provided with an orientation mark discernible at room temperature, said film provided with a complementary mark complementary to said orientation mark of said thermochromic layer.

MacWilliams et al. discloses a label and method for applying wherein the label (700) includes alignment features (703 and 704) having corresponding features on the underlying member (column 6 lines 26-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add an orientation mark and a complementary mark, as taught by MacWilliams et al., to the individual thermochromic portions (20a-k) and the backing in order to assure correct orientation of the portions to the backing, as taught by MacWilliams et al.

9. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plimpton in view of WO 01/46661 to Marques et al.

Plimpton teaches all that is claimed as discussed in the above rejections of claims 13, 14, 19-22, 25, 27 and 28 except for a refrigerator device including a temperature zone in the refrigeration device and said temperature-indicating element located in said temperature zone backing for indicating said predetermined desired temperature in said temperature zone.

Marques et al. discloses a refrigerator device including a temperature zone in the refrigerator device and a thermochromic indicating element within the temperature zone backing for indicating said predetermined desired temperature in said temperature zone. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the temperature range of the thermochromic indicating element, taught by Plimpton, to suit a temperature zone for a refrigerator device along with the zone, as taught by Marques et al., in order to provide more uses and increased marketability.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related devices or components thereof.

Of particular note is US 5,254,473 to Patel who discloses a transparent layer of polyurethane, is cured at room temperature, includes vacuum to remove solvents, and is prepared by cast coating.


Art Unit: 2859

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251.

The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'R. Alexander Smith', with a long horizontal flourish extending to the right.

R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
January 10, 2007